

## PATENT SPECIFICATION



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## COMPLETE SPECIFICATION

## Improved Means for Measuring the Hardness of Abrasive Disks

We, HERMANN BARTHEL, GEORG SCHÄFER and ALWINE SCHÄFER, all of German nationality, trading as the firm Kugelfischer Erste Automatische Gusstahlkugelfabrik vorm. Friedrich Fischer, of Hauptbahnhofstr. 134, Schweinfurt on the Maine, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

Methods of measuring the hardness of abrasive disks, such as for example the scratching method, the impact method, the scraping method and the sand blast method are already known but they are all insufficiently reliable.

This invention enables the result of the test to be obtained with certainty to a very high degree of accuracy. A thin plate of perforatable material, such as for example, sheet metal, cardboard or pasteboard or the like, of any desired size is laid on the abrasive disk to be tested. A pointed conical impact pin, which is given one or a definite number of blows of uniform intensity perforates the plate and penetrates into the abrasive disk. The means employed for driving in the pin is such as to deliver a standardized driving force. The depth of penetration depends on the hardness of the abrasive disk. The resulting hole in the plate

forms a quantitative record of the abrasive disk being tested in that the dimension of the diameter, which can be measured by suitable means, can be taken as the hardness number. 35

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:— 40

1. Means for measuring the hardness of abrasive disks or plates comprising a conical impact pin, means for driving the said pin into the disk or plate, a sheet of perforatable material to be inserted between said pin and said disk or plate, and means for measuring the diameter of the hole produced in the said sheet. 45 50

2. Means as claimed in claim 1 in which the means for driving the conical impact pin into the disk is capable of delivering a standardized driving force. 55

3. Means as claimed in claim 1 or 2 in which the sheet of perforatable material is a sheet of cardboard.

4. Means as claimed in claim 1 or 2 in which the sheet of perforatable material is a sheet of metal. 60

Dated this 26th day of October, 1934.

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